

PCTWORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : A61K 7/48	A1	(11) International Publication Number: WO 00/47181 (43) International Publication Date: 17 August 2000 (17.08.00)
(21) International Application Number: PCT/GB00/00515 (22) International Filing Date: 15 February 2000 (15.02.00) (30) Priority Data: 9903425.8 15 February 1999 (15.02.99) GB (71) Applicant (for all designated States except US): LUSH LIMITED [GB/GB]; 29 High Street, Poole, Dorset BH15 1AB (GB). (72) Inventor; and (75) Inventor/Applicant (for US only): AMBROSEN, Helen [GB/GB]; 29 High Street, Poole, Dorset BH15 1AB (GB). (74) Agent: STURT, Clifford, Mark; Miller Sturt Kenyon, 9 John Street, London WC1N 2ES (GB).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>
(54) Title: COSMETIC PRODUCTS COMPRISING CREAM OF TARTER AND SODIUM BICARBONATE		
(57) Abstract A surfactant product comprising a dicarboxylic acid, sodium bicarbonate and a surfactant preferably dihydroxybutanedioic acid, sodium bicarbonate and a surfactant and most preferably comprising cream of tarter, sodium bicarbonate and a surfactant. A mixture of sodium bicarbonate, cream of tarter and liquid surfactant forms a paste which hardens into a solid over a period of a few hours. The mixture provides a solid material which is highly stable.		

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece			TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
CG	Congo	KE	Kenya	NL	Netherlands	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NO	Norway	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	NZ	New Zealand		
CM	Cameroon			PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakhstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		

COSMETIC PRODUCTS COMPRISING CREAM OF TARTER AND SODIUM BICARBONATE

The present invention relates to surfactants particularly those for use in contact with the human or animal body.

There is an increasing awareness of environmental issues particularly with regard to the disposal of product packaging and the like. The present invention has been made against this background.

Surfactants are conventionally supplied in containers made, for example, of a rigid or semi-rigid plastics material. The container adds significantly to the cost of the product and environmental pollution is caused by the disposal of empty containers.

According to one aspect of the present invention there is provided a surfactant product for use in contact with the human or animal body, the product having the form of a solid and comprising cream of tartar, sodium bicarbonate and a surfactant.

In addition to the already mentioned beneficial reduction in costs and avoidance of environmental pollution, the present invention can provide appealing novelty items.

Embodiments of the present invention will now be described in more detail and by way of further example only.

Although the invention relates to surfactants for use in contact with the human or animal body generally, a description will be given in relation to a bubble bath product.

Conventionally bubble bath is a liquid which is sold in a range of containers often, for example, made of a rigid or semi-rigid plastics material. The provision of the container adds significantly to the cost of the product and environmental pollution is caused by the disposal of the empty containers.

It has surprisingly been found that the simple mixture of conventional liquid bubble bath with sodium bicarbonate and cream of tartar produces a relatively stable solid form product. The product is remarkably stable, for example, in not rapidly reacting with water in the atmosphere at normal indoor humidity levels.

Effervescent bath tablets have been known for many years. Such bath tablets can contain sodium bicarbonate and it has also been proposed to provide a bath product comprising a mixture of citric acid and sodium bicarbonate. The product resulting from the mixture of cream of tartar and sodium bicarbonate has, however, very different characteristics from those of a citric acid and sodium bicarbonate mixture. A mixture containing sodium bicarbonate and citric acid will effervesce strongly when immersed in water and dissolve quickly. That is, they are highly unstable in the presence of water, as is required by their intended use. It is therefore highly surprising that a mixture consisting of sodium bicarbonate and cream of tartar provide a solid material which is highly stable. It is even more surprising that the formation of a stable solid material can be retained when a conventional liquid bubble bath is added to the cream of tartar and sodium bicarbonate mixture.

A mixture of 60 % sodium bicarbonate, 30% cream of tartar and 10% surfactant forms a paste which hardens into a solid over a period of a few hours. The resultant solid material can be broken with the hands and thus small pieces of a solid bar of bubble bath can be broken off and added to a bath as required. The material is thus in stark contrast to the known effervescent bath tablets which disintegrate if an attempt is made to break-off small pieces in the manner just described.

As mentioned above, in preparation the product is in the form of a paste which subsequently hardens into a stable solid. The final product can thus very easily be formed in

many useful and/or novelty shapes. Moreover, there is no requirement for a rigid plastics container; which reduces costs and avoids environmental pollution caused by the disposal of empty containers.

One example of the relative ratios of the components is given above. These can of course be varied, the requirement being only that a useable solid form product results. It appears most preferable for the sodium bicarbonate to constitute 50% to 60% of the initial mixture, cream of tartar 25% to 30% and surfactant 10% to 25%. Small amounts of additives may be included, such as a fragrance and/or colourant. Stated generally, a broad range would be for the sodium bicarbonate to constitute 30% to 65% of the initial mixture, cream of tartar 15% to 32.5% and surfactant 2.5% to 55%.

Although the above description has been of a solid bubble bath as an example of a surfactant, it will be appreciated that the invention is equally well suited to other surfactants/uses. As specific examples mention is made of replacement of the conventional liquid bubble bath by conventional: shampoos, shower gels, toothpastes, facial washes etc. Thus, the surfactant will normally be a foaming agent.

Cream of tartar is readily available and has been used in the above examples for ease of reference. Cream of tartar is of course a form of tartaric acid, itself also known as dihydroxybutanedioic acid, a dicarboxylic acid and one of the most widely distributed of plant acids. Cream of tartar is a common name for potassium hydrogen tartar. Other common names include Crystals of Argolis. The substance is usually obtained from by-products of wine fermentation. In partially purified form, tartar was known to the ancient Greeks and Romans and the free acid was first isolated in 1769. Its use with a surfactant is, however, not known to have

been previously proposed. The present invention is not limited to the use of cream of tartar, other forms of organic acid being considered equally applicable.

Beneficial additives can include one or more essential oils. Colouring additives can also be used to provide not only a general aesthetic appeal but also marketing possibilities by incorporating a brand name or the like with an effect similar to the lettering in edible rock or candy. This can be achieved by moulding the letters from a paste incorporating a colouring additive and then moulding the paste of the main body around the individual letters.

CLAIMS

1. A surfactant product for use in contact with the human or animal body, the product having the form of a solid and comprising cream of tartar, sodium bicarbonate and a surfactant.
2. A surfactant product for use in contact with the human or animal body, the product having the form of a solid and comprising dihydroxybutanedioic acid, sodium bicarbonate and a surfactant.
3. A surfactant product for use in contact with the human or animal body, the product having the form of a solid and comprising a dicarboxylic acid, sodium bicarbonate and a surfactant.
4. A surfactant product as claimed in any preceding claim and prepared from a mixture including 50 % to 60% by weight of sodium bicarbonate.
5. A surfactant product as claimed in any preceding claim and prepared from a mixture including 10 % to 25% by weight of surfactant.
6. A surfactant product as claimed in claim 1 and prepared from a mixture including 25 % to 30% by weight cream of tartar.

7. A surfactant product as claimed in any preceding claim and further including one or more additives.
8. A surfactant product as claimed in claim 7 including a fragrance as an additive.
9. A surfactant product as claimed in any preceding claim and further including a colouring additive providing lettering or the like in the product.
10. A surfactant product as claimed in any preceding claim wherein the surfactant is a bubble bath.
11. A surfactant product as claimed in any of claims 1 to 9 wherein the surfactant is a shampoo.
12. A surfactant product as claimed in any of claims 1 to 9 wherein the surfactant is a shower gel.
13. A surfactant product as claimed in any of claims 1 to 9 wherein the surfactant is a toothpaste.
14. A surfactant product as claimed in any of claims 1 to 9 wherein the surfactant is a facial wash.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/00515

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K7/48

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 629 468 A (ANDERSEN HOWARD P) 21 December 1971 (1971-12-21) claims 1-7,9-12	3,4,7-9
Y		1,2,5,6, 10-14
Y	FR 2 549 723 A (GREFF DANIEL) 1 February 1985 (1985-02-01) page 1, line 16 - line 18 page 2, line 20 - line 22 page 2, line 42 - line 48 claims	1-12,14
Y	GB 1 492 660 A (COLGATE PALMOLIVE CO) 23 November 1977 (1977-11-23) page 2, line 23 page 2, line 33 - line 37 claims	1-14
	-/--	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

26 April 2000

Date of mailing of the international search report

04/05/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Pelli Wablat, B

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/00515

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DATABASE WPI Section Ch, Week 197830 Derwent Publications Ltd., London, GB; Class D21, AN 1978-54399A XP002136207 & JP 53 069838 A (LION FAT & OIL CO LTD), 21 June 1978 (1978-06-21) abstract ---	1-12, 14
Y	US 4 127 645 A (WITZEL FRANK ET AL) 28 November 1978 (1978-11-28) abstract column 2, line 29 - line 31 claims ---	1-9, 13
Y	GB 1 507 356 A (BLENDAX WERKE SCHNEIDER CO) 12 April 1978 (1978-04-12) the whole document ---	1-9, 13
A	PATENT ABSTRACTS OF JAPAN vol. 011, no. 063 (C-406), 26 February 1987 (1987-02-26) & JP 61 225117 A (KAO CORP), 6 October 1986 (1986-10-06) abstract ---	1-12, 14
A	FR 1 540 469 A (ETS MARCEL GRANIER) 19 August 1968 (1968-08-19) the whole document -----	1-14

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 00/00515

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3629468	A	21-12-1971	NONE	
FR 2549723	A	01-02-1985	NONE	
GB 1492660	A	23-11-1977	FR 2327762 A JP 1384154 C JP 52054038 A JP 61052123 B	13-05-1977 09-06-1987 02-05-1977 12-11-1986
JP 53069838	A	21-06-1978	JP 1303057 C JP 60026766 B	14-02-1986 25-06-1985
US 4127645	A	28-11-1978	NONE	
GB 1507356	A	12-04-1978	NONE	
JP 61225117	A	06-10-1986	JP 1845051 C JP 5058406 B	25-05-1994 26-08-1993
FR 1540469	A		NONE	